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Mitchell et al.

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(54) **APPARATUS, METHOD, AND SYSTEM FOR DIAGNOSING REDUCTANT DEPOSITS IN AN EXHAUST AFTERTREATMENT SYSTEM**

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(57) **ABSTRACT**

An exhaust gas treatment system for an internal combustion engine may have a reductant delivery system that delivers reductant to an exhaust stream in an exhaust aftertreatment system. A temperature sensor may be positioned in or near the flow of reductant and exhaust to measure the temperature of the reductant and exhaust. A change in temperature over time, such as an increase, decrease, or change in variation amplitude, may indicate the presence of a reductant deposit in the system. Detection of the deposit may initiate a regeneration cycle in which the operating characteristics of the system change to eliminate the reductant deposit to prevent it from hindering the performance of the exhaust aftertreatment system.

13 Claims, 5 Drawing Sheets

